IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	SAINT-REMY et al.	Confirmation No.:	9175
Serial No.:	10/566,851	Art Unit:	1644
Filed:	February 1, 2006	Examiner:	Michael E. Szperka
Customer No.:	21559		
Title:	VARIABLE ANTIBODIES		

REPLY TO SPECIES ELECTION REQUIREMENT

In reply to the Species Election Requirement transmitted in connection with the above-captioned case on December 24, 2008, Applicants elect, with traverse, the species of a modified antibody or a modified fragment of an inhibitory antibody against FVIII having substantially the same affinity to FVIII compared to the native antibody, where the inhibitory antibody or fragment includes: an immunoglobulin light chain sequence having at least 90% sequence similarity to SEQ ID NO: 4, and an immunoglobulin heavy chain sequence having at least 90% sequence similarity to SEQ ID NO: 2, where the glycosylation site at positions Asn47 to Thr 49 of SEQ ID NO: 2 is mutated. Applicants submit that the elected species contains sufficient structural features to define a functional antigen binding site.

Claims 34-45, 47, and 58-65 read on the elected species

Claims 34-45, 47, and 58-65, for the reasons set forth below, read on the elected species. In particular, the above-elected species is a member of the genus of the inhibitory antibodies and antibody fragments encompassed by claims 34-42, 44, and 47. Claim 58 recites the elected species. Claims 59 and 60 describe particular mutations in the glycosylation site of an inhibitory antibody encompassed by the elected species. Claims 43, 45, and 61-63 are encompassed by the elected species by reference to the

corresponding nucleotide sequences. Claims 65 and 66 are encompassed by the elected species by reference to the specific CDR sequences for the both the immunoglobulin heavy and light variable chain (SEQ ID NOS: 33-38).

The species election requirement should be withdrawn

The Office states that the claims contain patentably distinct species of antibodies that bind FVIII. In response, Applicants note that the Offices considers claim 34 to be generic. Applicants submit that claim 34 is directed to a single inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, it sets forth a special technical feature over Jacquemin et al. (WO 01/04269; hereafter "Jacquemin") in view of Co et al. (U.S. Patent No. 5,714,350; hereafter "Co"). Applicants, for the reasons set forth below, respectfully submit that Jacquemin and Co do not teach or suggest the special technical feature encompassed by the claims and that the species election requirement, therefore, should be withdrawn.

Claims 34 is directed to a modified antibody or antibody fragment of an inhibitory antibody against FVIII where the glycosylation of the variable region has been modified, and where it has *substantially the same affinity* to FVIII as compared to the native antibody. Jacquemin and Co, even if combined, do not teach or suggest modification of the glycosylation of an *inhibitory antibody* against FVIII, much less that such modification would result in an antibody having *substantially the same affinity* as the native antibody.

Applicants' specification clearly defines a "modified antibody" as "an antibody, which in comparison to the wild-type antibody, is different with respect to its size, more particularly, which is different either with respect to its glycosylation[,] but with a *similar affinity* to its ligand as the wild-type antibody." (Page 16, lines 1-4; emphasis added).

Co teaches the modification of the glycosylation pattern of the variable region of an immunoglobulin chain to *increase* the affinity of the immunoglobulin compared to the

affinity of the wild-type immunoglobulin (see, for example, the title of the application "Increasing Antibody Affinity by Altering Glycosylation in the Immunoglobulin Variable Region"). Co does not teach or suggest that such modification should be performed on an *inhibitory antibody* against FVIII, nor does it teach or suggest that such modification should be performed to generate an antibody having *substantially the same affinity* to FVIII compared to the native antibody.

The deficiency in Co is not cured by Jacquemin. While Jacquemin discloses the KRIX-1 antibody, Jacquemin fails to teach or suggest that the glycosylation of KRIX-1 antibody be modified, much less that such modification be performed to generate an antibody having substantially the same affinity to FVIII compared to the native antibody. Accordingly, Co and Jacquemin, alone or in combination, fail to teach or suggest the special technical feature encompassed by claim 34 and its dependent claims. Applicants respectfully request that the Office reconsider and withdraw the species election requirement.

CONCLUSION

Transmitted herewith is a Petition to extend the period for replying to the Species Election Requirement for one month, to and including February 24, 2009, and payment of the required extension fee.

If there are any charges or credits, please apply them to Deposit Account No. 03-2095.

Respectfully submitted,

Date: 24 February 2009

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